United States Courts
Southern District of Texas
FILED

OCT 2 2 2007

Michael N. Milby, Clerk of Court

IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF TEXAS

HOUSTON DIVISION

UNITED STATES OF AMERICA,)
v.) Criminal No.
BP PRODUCTS NORTH AMERICA INC.,))) IMDED SEAT
Defendant) <u>UNDER SEAL</u>

CRIMINAL INFORMATION

The United States Attorney Charges:

Unscaled 10-25-07

Sealed

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COUNT 1

BP Texas City Refinery Operations

- 1. At all relevant times, BP Products North America Inc. ("BP Products"), a subsidiary of BP plc, owned and operated an oil refinery located in Texas City, Texas (hereinafter "Texas City refinery"), within the Southern District of Texas.
- 2. Prior to December 1998, the Texas City refinery was owned by Amoco. In December 1998, BP plc merged with Amoco. As a result of the merger, BP Products' predecessor acquired the Texas City refinery. As of March 23, 2005, the Texas City refinery was the largest refinery owned by BP Products in the United States. The Texas City refinery covered more than 1200 acres, employed approximately 1800 permanent BP Products staff and approximately 2000 contract workers.
- 3. Within the BP Products Texas City refinery, there were 29 different refining units and four chemical units that had the capacity to process 460,000 barrels of crude oil per day into components including gasoline, jet fuel, diesel fuel, and chemical feed stocks.

- 4. During operations at the BP Products Texas City refinery, it was a common and accepted practice for contractor employees and personnel to work out of temporary trailers throughout the facility.
- 5. During operations at the BP Products Texas City refinery, if it was necessary to release hydrocarbon vapors to the open air, the refining units used three methods: a "flare system," a "blowdown stack" or direct atmospheric vents.
- 6. A flare system allowed hydrocarbon vapors to be released through the top of a tall pipe structure, where a flame burned off the hydrocarbon vapor in order to combust hazardous air pollutants emitted into the air, and to ensure that the hydrocarbons did not reach an ignition source away from the flare. Most of the BP Products Texas City refinery's refining units used a flare system for releasing hydrocarbon vapor during an emergency or upset.
- A blowdown stack employed a large drum to receive hydrocarbon vapors and liquids. In a properly designed and functioning blowdown system, hydrocarbon liquids were received in the blowdown drum and sent to a closed sewer system, and hydrocarbon vapors were released up through the blowdown stack, a large pipe directly above the drum, and then directly to the open air. The blowdown stack did not use a flame at the top to burn hydrocarbon vapors and instead released vapors containing hazardous air pollutants directly to the open air. If not properly designed and maintained, in some circumstances, hydrocarbon vapor and liquids released from the blowdown stack had the potential to reach a ground level ignition source and explode.

The Clean Air Act

- 8. The Clean Air Act ("CAA"), Title 42, United States Code, Section 7401 *et seq.*, is the Nation's comprehensive air pollution control statute. As part of the 1990 CAA amendments, Congress promulgated Section 112(r)(7), Title 42, United States Code, Section 7412(r)(7), to "prevent accidental releases of regulated substances" from facilities such as the BP Products Texas City refinery. Section 112(r)(7) in turn authorizes the Administrator of the Environmental Protection Agency ("EPA") to promulgate "release prevention, detection and correction requirements" to prevent accidental releases. Title 42, United States Code, Section 7412(r)(7)(A). The regulations are known as Risk Management Plan ("RMP") regulations and are set forth at Title 40, Code of Federal Regulations ("C.F.R."), Part 68.
- 9. Under the RMP regulations, BP Products was required to implement prevention, detection and correction requirements set forth in 40 C.F.R. Part 68, in order to prevent explosions from accidental releases of hazardous air pollutants. 40 C.F.R. § 68.12(d)(3).
- 10. Pursuant to Section 113(c)(1) of the Clean Air Act, 42 U.S.C. Section 7413(c)(1), it is a criminal violation to knowingly violate RMP regulations promulgated under Section 112(r)(7) of the Clean Air Act.

BP Products Texas City Refinery Isomerization Unit, Blowdown Drum and Stack

11. One of the refining units at the BP Products Texas City refinery used for processing gasoline components was the Isomerization Unit ("ISOM unit"). Within the ISOM unit was a process component known as the Raffinate Splitter. "Raffinate" was a term used to describe gasoline components in the ISOM unit that were in the process of or had been refined. The Raffinate Splitter's main function was to separate raffinate into "light" and "heavy" raffinate.

The light raffinate was normally processed in the ISOM unit and the heavy raffinate was normally blended into gasoline. The Raffinate Splitter was a single tower with a height of 164 feet and an approximate volume of 3700 barrels. Raffinate was referred to as a "light end hydrocarbon," that could easily ignite.

- 12. The Raffinate Splitter was equipped with relief valves and headers, which were required to be designed and maintained to ensure that releases of hydrocarbon vapors to the open air were only the result of an unplanned process upset or emergency.
- 13. The Raffinate Splitter relief valves and headers were connected by a piping system to a blowdown stack, known as "F-20." The F-20 stack also received hydrocarbon vapors and liquids from other components in the ISOM unit. BP Products was required to design and maintain all the relief valves and headers in the ISOM unit, so that releases of hydrocarbons were sent to the blowdown stack only in the case of an unplanned process upset or emergency.
- 14. The blowdown drum and stack structure was designed to operate with a "quench system," where water could be injected into the blowdown drum to cool the hydrocarbon vapors and change some of the hydrocarbon from vapors to liquids, which were sent to a closed sewer system. Remaining hydrocarbon vapors were sent through the stack and released directly to the open air.

Explosion of March 23, 2005

15. In the month prior to March 23, 2005, the ISOM unit was undergoing a non-cycle ending "turnaround" where the unit was shut down and scheduled maintenance and necessary repairs were performed on different components in the unit. On March 23, 2005, the Raffinate Splitter was in turn undergoing a "startup," where after having been shut down for a month, it was being

re-started for operation to enhance raffinate feedstocks. The start-up process required sending up to 22,000 gallons of product to the Raffinate Splitter, the interior of which was subjected to pressures up to 40 pounds per square inch (psi) and temperatures as high as 300 degrees Fahrenheit. The Raffinate Splitter was viewed by the BP Products Texas City refinery workers as one of the more basic units at the refinery to start up and operate. The start up procedure of the Raffinate Splitter was also recognized as the most difficult or dangerous phase of the unit's operation, due to the re-introduction of high temperatures, feedstock and increased pressure.

- 16. The startup procedure for the Raffinate Splitter involved the work of several operators and supervisory personnel. BP Products was required by federal regulations to ensure that supervisors and operators followed specific written instructions to ensure safe startups at the Raffinate Splitter. BP Products also was required to ensure that alarm systems and process safety components in the ISOM unit were operating correctly to enable supervisors and operators to perform startups at the Raffinate Splitter in a safe manner.
- 17. At approximately 1:15 pm on March 23, 2005, after excessive liquid pressure and temperature had built up inside the Raffinate Splitter for several hours, hydrocarbon vapors and liquids were released through relief valves and headers from the Raffinate Splitter to the F-20 blowdown stack. The volume of the hydrocarbon liquid was so great that it exceeded the capacity of the F-20 blowdown stack and released directly out the top of blowdown stack into the open air. The hydrocarbons released from the stack formed a vapor cloud at ground level and reached an ignition source, which resulted in a catastrophic explosion.
- 18. The explosion caused the deaths of 15 contractor employees at the BP Products Texas

 City refinery, who were located in two temporary trailers approximately 150 feet from where the

hydrocarbons had been released to the open air. Their names were: Glenn Bolton, Lorena Cruz-Alexander, Rafael Herrera, Daniel Hogan, Jimmy Hunnings, Morris King, Larry Linsenbardt, Arthur Ramos, Ryan Rodriguez, James Rowe, Linda Rowe, Kimberly Smith, Susan Taylor, Larry Thomas, and Eugene White. The explosion also caused the injuries of at least 170 other workers at the Texas City refinery.

- 19. The release of the hydrocarbons out of the blowdown stack and the explosion were preceded by several events:
- a. BP Products failed to notify non-essential contractor employees and all nonessential BP Products employees located in temporary trailers in close proximity to the Raffinate Splitter that the startup was going to take place.
- b. The Raffinate Splitter bottoms area was filled above the level that was permitted under written procedures for startups, though this had become a routine practice for startups of the Raffinate Splitter.
- c. The ISOM unit control board operator had filled the Raffinate Splitter tower with feed, but raffinate was not being emptied from the Raffinate Splitter. A level instrument on the control board indicated to the operator that the level in the tower was decreasing when in fact it was increasing. Other information reflected the rising level of raffinate feed in the Raffinate Splitter. The control board panel did not automatically calculate and display to the operator that the mass balance was changing.
- d. Alarms in the Raffinate Splitter and in the blowdown stack failed to function or were ignored.

- e. Excess pressure was relieved by sending hydrocarbons through the 8" chain valve to the F-20 blowdown stack instead of to the 3-pound vent system that led to a flare. Although this had not been authorized, it had also become a common practice for startups of the Raffinate Splitter for several years.
- f. BP Products was releasing hydrocarbons into the open air through the F-20 blowdown stack during startups although BP Products had repeatedly failed to provide advance notice to the Texas Commission on Environmental Quality ("TCEQ") that it would be releasing the hydrocarbons during the startups.
- g. BP Products did not believe that an overfill of the Raffinate Splitter was a credible threat and chose not to perform a "what-if" scenario for an overfill of the Raffinate Splitter or the F-20 blowdown stack.
- h. BP Products had failed since at least 1999 to perform a relief valve study on the ISOM unit to determine whether the F-20 blowdown stack had the capacity to safely release excess hydrocarbons.

Knowing Violations of Risk Management Practices

20. Between in or about January 1999 and on or about March 23, 2005, in Texas City, Texas, within the Southern District of Texas, the defendant, BP PRODUCTS NORTH AMERICA INC., did knowingly violate a requirement promulgated pursuant to the Clean Air Act, Title 42, United States Code, Section 7412(r)(7); specifically, defendant BP PRODUCTS NORTH AMERICA INC. knowingly failed to do the following:

- a. Establish and implement written procedures to maintain the ongoing mechanical integrity of process equipment, in violation of Title 40, Code of Federal Regulations, Section 68.73(b).
- b. Inform contract owners and operators of the known potential fire, explosion, or toxic release hazards related to the contractors occupation of temporary trailers in the vicinity of the ISOM Unit, in violation of Title 40, Code of Federal Regulations, Section 68.87(b)(2).

All in violation of Title 42, United States Code, Section 7413(c)(1).

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